Benefit of Trees for Indianapolis

Trees and woodlands provide myriad benefits. Canopy cover, or more precisely the amount and distribution of leaf surface area, is the driving force behind the urban forest's ability to produce benefits for the community.

Perhaps the benefits most pertinent to the City are:

Real estate

Homeowners that properly place trees in their landscape can realize savings up to 58% on daytime air conditioning.

Property values increase 5% – 15% when compared to properties without trees (depending on species, maturity, quantity, and location).

Air quality

One acre of trees produces enough oxygen for 18 people every day. Trees clean particulates and gaseous pollutants from the air. Trees directly sequester carbon dioxide as root, wood, and leaf biomass as they grow.

Trees near buildings can reduce the demand for heating and air conditioning, thereby reducing emissions associated with electric power production and consumption of natural gas. Reducing demand for cooling is particularly important in Indianapolis due to the relatively high carbon dioxide emitting fuel mix for electrical generation; over 99% of our energy is provided by coal.

Reduced air pollution from the presence of trees helps to ameliorate respiratory problems, such as asthma – the leading serious chronic illness among children.

Trees alleviate the conditions that contribute to ozone formation. The American Lung Association estimates that ozone-associated health care cost Americans about $50 billion annually.

Noise pollution

Noise from highways and other sources can be reduced with trees. Used alone, trees must be planted in belts 35 to 100 feet wide to create noticeable reductions. However, earth berms can cut traffic noise by up to half, if they are tall enough to hide the source of noise and are planted with trees, shrubs, and grasses. Where this kind of adjustment to the topography is not possible, a row of trees and a solid wall reaching up to the base of the crowns will provide a similar reduction.

Stormwater retention

Trees hold water in their canopy as well as their root systems. The average tree intercepts 2,714 gallons of stormwater each year and root growth and decomposition increase the capacity and rate of soil infiltration by rainfall and reduce overland flow.

Trees are the Ultimate Multi-taskers

- Mitigate polluted stormwater runoff.
- Mitigate poor air quality.
- Reduce energy needed for heating and cooling buildings.
- Mitigate heat islands.
- Increase real estate values.
- Create sense of place.
- Promote psychological, social and physical health.
- Improve community image for tourism and business attraction.
- Provide wildlife habitat

Urban heat island

Shading reduces the amount of radiant energy absorbed and stored by built surfaces. In central Indiana, a 10-degree difference has been documented between Indianapolis and the surrounding rural areas.

Shading also reduces the frequency of street repaving. Heat degrades the binder in asphalt; shading the asphalt slows the degradation of the binder and prolongs the life of the street. Only about 14% of the City's streets are shaded.

Outdoor physical activity

Studies have found a correlation between community forest and the average amount of physical activity exerted by neighborhood residents. People are more incline to get outdoors and exercise when their surroundings are greener. Exercise leads to longer, healthier lives and can reduce the incidence of obesity and diabetes.

Children who spend more time outside pay better attention inside. Children with ADHD are better able to concentrate, complete tasks, and follow directions after playing in natural settings.

Social and psychological health

Trees in urban areas are directly correlated with lower levels of fear, fewer incivilities, and less violent and aggressive behavior. It is thought that part of this effect is due to trees helping to relieve mental fatigue.

Hospital patients with a view of trees out their windows recover much faster and with fewer complications and require fewer pain-killing medications than similar patients without such views.

Current Indianapolis situation

Indianapolis has seen a 37% loss in wooded lands from 1980 to 2000 and a 5.5% of high quality woodland from 1999 to 2002.

Total number of trees in Marion County is estimated at four million. The USDA estimates that the annual environmental and aesthetic benefit to the city of the average tree is $49. For Marion County, the annual benefit of the urban forest calculates to $196 million.

City	Percent Tree Cover
Portland, OR	42
Asheville, NC	42
Cincinnati	36
Atlanta	36
Washington	29
Minneapolis	26
Indianapolis	**23**
Boston	22
New York	21
Baltimore	21
Philadelphia	16

Sources

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